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PROGRAMMED TV INSTRUCTION IN A FOREIGN LANGUAGE.

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PAST EFFORTS TO USE PROGRAMED INSTRUCTION IN FOREIGN LANGUAGES HAVE PRODUCED VARYING RESULTS. TELEVISION, AS A POSSIBLE SELF-INSTRUCTIONAL MACHINE, HAS BEEN NEGLECTED IN THESE EFFORTS, EVEN THOUGH IT OFFERS UNLIMITED POSSIBILITIES FOR BOTH THE PROGRAMER AND THE STUDENT. CRITICS OF TV SAY THAT PROGRAMING IS DIFFICULT AND EXPENSIVE, THOUGH THIS WAS FOUND TO BE UNTRUE IN THE LANGUAGE LABORATORY AT FLORIDA ATLANTIC UNIVERSITY. IN AN EFFORT TO LEARN MORE ABOUT SELF-INSTRUCTION IN FOREIGN LANGUAGES, STAFF MEMBERS OF THE DEPARTMENTS OF LANGUAGES AND LINGUISTICS AND OF LEARNING RESOURCES PREPARED A PROGRAMED TV SERIES IN SPANISH. AN AMPEX VR 1500 VIDEOTAPE RECORDER WAS USED TO RECORD THE PROGRAM, WHICH CONSISTED OF 6,000 FRAMES AND SOME LIVE PERFORMANCE. THE PROBLEM OF SELF-PACING WAS SOLVED BY EQUIPPING EACH STUDENT BOOTH IN THE LAB SO THAT A STUDENT COULD SELECT, START, STOP, REVIEW, OR ACCELERATE ACCORDING TO HIS OWN REQUIREMENTS. THE PROGRAM IS BEING USED WITH EXPERIMENTAL GROUPS AND WILL BE EVALUATED DURING THE COMING YEAR. THIS PAPER WAS PREPARED FOR PRESENTATION AT THE ANNUAL INSTRUCTIONAL TELEVISION CONFERENCE OF THE NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS (4TH, SANTA BARBARA, APRIL 3-5, 1966). (AM)

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PROGRAMMED TV INSTRUCTION IN A FOREIGN LANGUAGE

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Programmed TV Instruction in a Foreign Language

Juan Estarellas

The teaching of Foreign Languages involves different problems today. Perhaps among the most important and more crucial and pressing problems are overcrowded classrooms and language teaching materials based on dull drills which are an insult to the intellectual capacities of the students. In some ways programmed instruction is the solution to this problem. Unfortunately, as Professor Carroll points out, many of these programs in foreign languages are inefficient.[1] It is true that a great number of the programs in foreign languages on the market today are limited in the skills and competence of their terminal behavior and due to this fact, in general many of them are not practical for school use. In many of the programs there are still confusing views and data as to whether they are feasible for total self-instruction. While some programmers seem to believe that total self-instruction is possible, others tend to believe that it is only partially possible. Student reactions and progress apparently varied according to the different programs and programmers. While Marty reported that his students missed the teacher,[2] Saltzman reported that his students attained competence faster in his program than they did in ordinary academic work.[3] My own experience in programming has been that students can learn from programmed materials as much or more so than they do in an ordinary course.[4]

After several years of experimentation and research one reaches the conclusion that there is still very little definite data in

programmed instruction in foreign languages and that the success of a program and whether it can be used in total self-instruction depends mainly on two aspects: 1) the materials, 2) the medium or machine used to communicate these materials to the students. A great deal of the pitfalls of programmed instruction in foreign languages have been that the behavior required from the student is, from the outset to the end, a behavior which is not well related to the actual process of language or to the normal verbal communication among human beings. Whether a book or an audio-tape is the source, the behavior demanded of the student has been unrealistic for him.

In search for a medium and a process which would give the student a more realistic learning situation in which the very process of language could be related to the purpose of language, I began to experiment some time ago with different machines which would give him visual as well as audio stimuli. As a matter of fact, in the foreign language field there have been almost as many attempts to develop audio-visual machines and courses as there have been to develop programmed instruction materials. There have been many educators aware of this fact. Yet, in spite of this search for audio-visual teaching machines and development of audio-visual courses, the potentialities of a machine very familiar to everyone, namely television, have been neglected in programmed instruction. It was about four years ago at the Language Institute of the University of Hartford that I began to think about the potentialities of TV for self-instructional purposes. Television as a self-instructional teaching machine

offers possibilities unique in many respects; it can relate language to experience and action, it offers the student a face-to-face relationship, and it is easy to program. Unfortunately its possibilities have not been fully explored up to this time. In his survey on the subject of instructional TV, J. R. Reid,[5] bemoans the lack of experimentation with combination of TV presentations and programmed learning and points out to the future in this direction. But so far the most extensive use of TV is in conventional TV and conventional classroom instruction. It is perhaps for this reason that Professor Elton Hocking, in his work Language Laboratory and Language Learning, states that he continues to be unimpressed with language teaching by TV.[6] There is very little data on the potentialities of TV as a self-instructional machine whether in closed circuit or broadcast. Among the pioneers Gerald Newmark of the System Development Corporation, in his "Design for Teaching Foreign Languages Using Dramatic Motion Pictures and Programmed Learning Materials,"[7] started a trend in foreign languages. Lately, Stanley K. Gryde in "The Feasibility of Programmed Television Instruction"[8] describes the possibilities of this particular application in other curricular fields. There is a tremendous field to explore with unlimited possibilities for the programmer and for the student.

It has been said that TV instruction is difficult and too expensive.[9] In our research in programmed TV instruction our team found that programming TV was not difficult, nor was it expensive. One major difficulty however, was self-pacing. This problem was solved in the Audio-Video Language Laboratory which we designed for Florida Atlantic

University, Boca Raton, Florida.[10] In this laboratory, student booths have individual TV receivers which they control through a dial system. The student has at the point of his fingers X number of video sources or channels. Thus the student from his dial can select a program, stop it if he wants to review it, or move to another channel if he wants to go faster.

This control of the machine and the giving to the student random access for retrieval of programs was the first major step in solving programmed television instruction. The second step was the development of programs. An example of how these programs developed is my own course, Spanish Syntactic Structures: A Self-Instructional Video Course. This course is divided into Tasks, the Tasks are divided into Levels, and the Levels are divided into Problems. The Problems are divided into frames. The technique used in the program is linear. The student must react to the stimulus frame. Time is given to respond orally or in writing. Then the response frame appears, and the student sees and hears the correct response and repeats it.

The course begins with pronunciation and writing which is Task 1. Task 2 is really the syntactic structures. Level I deals with noun phrases, position of nouns and their gender and number. Levels 2 and 3 deal with the determiners. Problem 1 of Level II for instance deals with the determiners el/los and la/las.

An information panel is presented to the student with these determiners and an explanation. Next he moves into other frames like the following one:

Level 2. Problem 1
Frame 1

el
los
la
las _____ hombre

The student has to give a response to this frame by selecting the correct determiner. The next frame gives him the correct response, for instance:

Level 2. Problem 1
Frame 2

el hombre

He goes through a series of frames like this, then the determiners fade away, and he is given only the picture and the noun referring to the picture, and he must supply the appropriate determiner, for instance:

Level 2. Problem 1
Frame 5

_____ mujer

The next frame reinforces the response:

Level 2. Problem 1
Frame 7

la mujer

Next in this problem an oral and written stimulus with a picture appears. For instance:

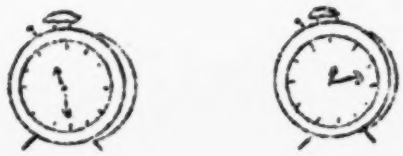
Level 2. Problem 1
Frame 12

_____ son pequeños.

(In this type of frame the student has already seen the item at least three times before he is asked to produce it.)

He must produce the whole noun phrase referring to the picture. Again the next frame reinforces the student's response:

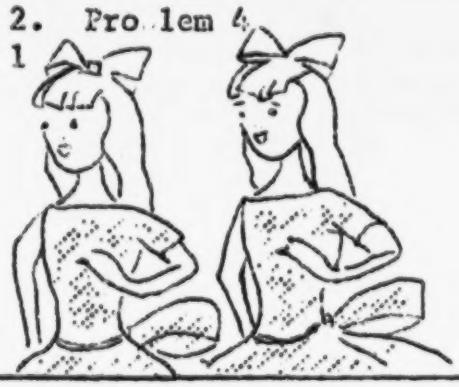
Level 2. Problem 1.
Frame 13.



Los relojes son pequeños.

In this way the program proceeds to all the determiners: este, ese, aquel, nuestro, vuestro, mi, su, un, with all their morphological variations. Different cues are used for these determiners such as, a hand touching something for este. After a group of determiners, there is a review on the form of the determiners. For instance, a frame asks:

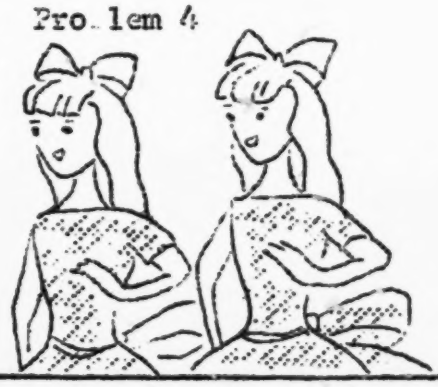
Level 2. Problem 4
Frame 1



¿El niño?

The student must respond referring to the picture with the proper form of the determiner and noun. The next frame gives the correct response:

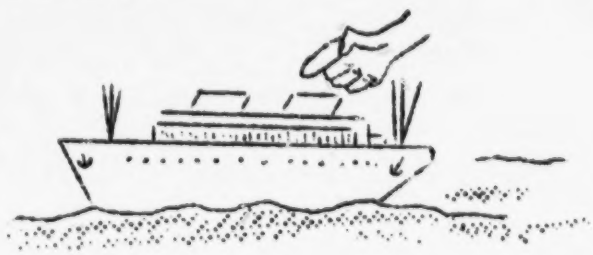
Level 2. Problem 4
Frame 2.



No, las niñas.

As he proceeds there are other review problems on the form and meaning of the determiner. Here the student not only must give a transformation on the determiner but on the meaning of the determiner. For instance, to the stimulus:

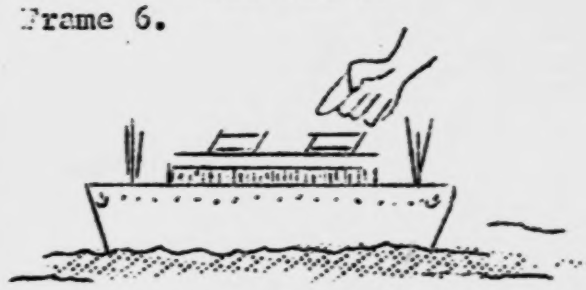
Level 2. Problem 6
Frame 5.



¿Aquel reloj?

He has to give an answer using the proper form and meaning of the determiner describing the picture and the noun. Thus, the response is:

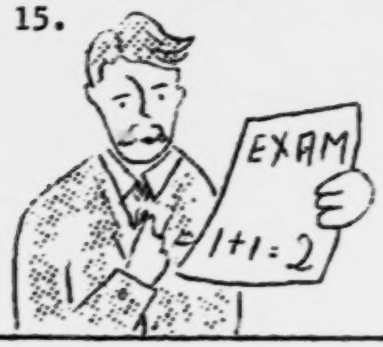
Level 2. Problem 6.
Frame 6.



No, este barco.

Thus the program moves to other levels and problems. Descriptive adjectives, subject personal pronouns, verbs, etc., are taught in this way. This teaches the student structural relationships as they relate to language behavior and experience. There are different kinds of levels, problems, and types of frames. Some are pattern transformation, others are substitution of structures or verbal units in relation to experience, and some are practice frames. Although some might fit into more than one catagory, they all aim towards a specific gradual shaping of the terminal behavior. All problems have explicit instructions for the student. The following frame shows one problem dealing with descriptive adjectives:

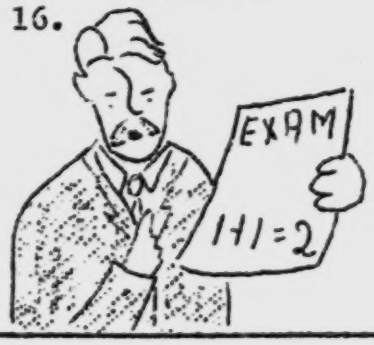
Level 5. Problem 5.
Frame 15.



¿Es un examen difícil?

The student must respond according to the cue in the picture. The correct response is in the next frame:

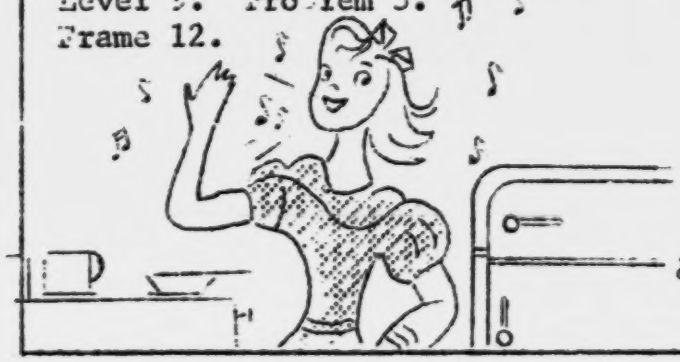
Level 5. Problem 5.
Frame 16.



No, mi examen es fácil.

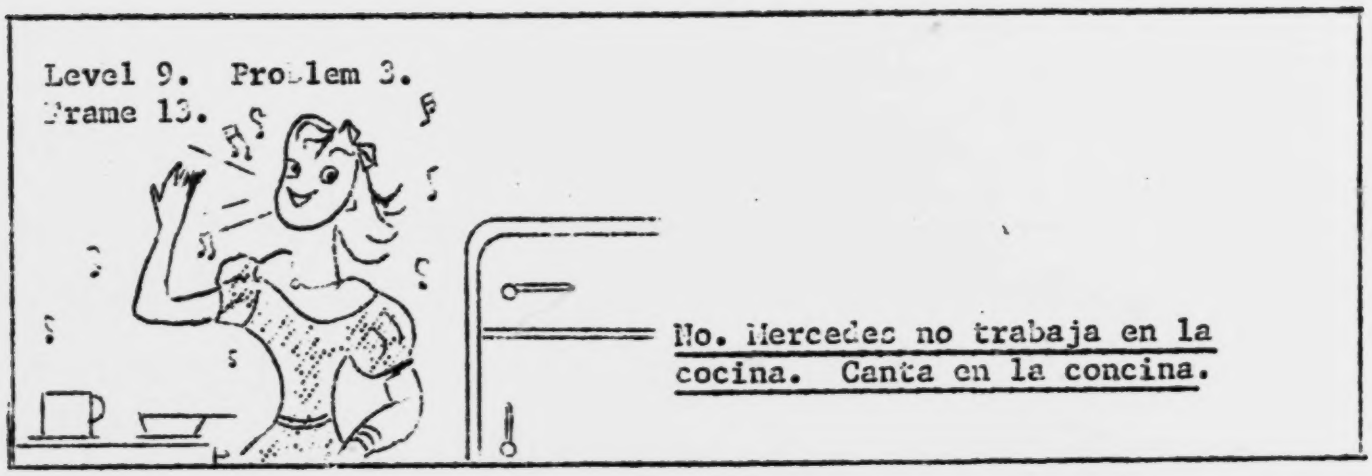
Which involves a change of determiner and descriptive adjective. With verbs, for instance, the program goes to a series of frames practicing the conjugation, then moves into a problem in which there is a practice with the meaning of the verbs, for instance:

Level 9. Problem 3.
Frame 12.



¿Trabaja Mercedes en la cocina?

The next reinforcing frame:



From these types of frames the program moves to complex situations in which the student has a conversation with the TV or there are stories on pictures in which the student is asked questions and has to answer them, asks questions and receives answers. The terminal behavior of this course is taken from the average objectives of a first-year course in college. The basic skills taught are listening, speaking, reading, and writing. The process is purely self-instructional. Vocabulary and structures are presented in a progressive related way of constant review of actual use with self-evaluation tests at the end of each level. Students are told not to proceed until they achieve sufficient mastery. In time, we have provided for the students to evaluate themselves, be graded by the computer, and told not to proceed until a satisfactory performance is achieved.[12] The sequence of verbal units used in the program to control and develop the verbal behavior of the learner in the target language is based on psycholinguistic theories and research. These theories were explained in other papers[13] about programming, languages, and language laboratories.

The program contains approximately 6,000 frames. The procedure used to videotape was as follows: The drawings were made into 2 by 2 transparencies which were placed into two Spindler Sauppe projectors and were projected into a vidicon camera. This source was recorded on an Ampex VR-1500 video tape recorder which serves also as a source in the language laboratory. While we did not use live persons in some parts of the program, the voices, a man and a woman, were introduced on camera at the beginning of each problem so that the students could identify with them. Live persons are introduced in conversation problems for easier transfer, by an R.C.A. TK60 4 1/2 inch image orthicon camera, and conversation is conducted in the following manner: A person points to a projected situation, for instance, a lady swimming in a wide swimming pool, and says, "Yo pesco en este río estrecho. ¿Y mi esposa?" The student is given a pause to answer, then the correct frame appears with a second person talking to the first person, saying "Su esposa nada en esta piscina ancha," and indicating the slide. Stories are told by a series of short animated pictures with a voice and written captions explaining the story. Then the pictures appear again, and questions (written and oral) are asked about the stories by an individual. The student is given a pause to answer, and then the correct frames appear (written and oral).

The program frames were developed by a team of graduate students and faculty members of the Department of Languages and Linguistics, the technical staff of Learning Resources assisted in the TV Production. The purpose behind the project was to learn more about self-instructional

uses of foreign languages and to develop this type of course to teach all our basic skill level courses in this manner. At this moment the program is in its formative stage and we are using it with experimental groups to get feedback and evaluation. There is a textbook containing all the visuals which was used as the script for the program, however, students using the TV program do not need the book except for writing. This textbook uses only English for the instructions. It can be used also with audio tapes for those who do not have video. We are investigating different ways of approach with the experimental students such as some students doing the written work first and then the oral part; others doing the oral part first and then the written part. Next year we intend to do a large evaluation to measure student reactions, latency, meaning, retention, etc., as compared with a control group using the same items but taught through drills and an instructor.

In doing this program we are discovering the tremendous possibilities that TV offers as a self-instructional machine, and we are confident that, thanks to this medium, the days of total self-instruction are nearer.

1. J. B. Carroll, "A Primer of Programmed Instruction in Foreign Languages," IRAL, 1963, 2, 138.

2. F. Marty, Programming a Basic Foreign Language Course: Prospects For Self-Instruction, Hollins College, Va., 1962.

3. J. Saltzman, "Programmed Self-Instruction and Second Language Learning," IRAL, 1963, I, 104-114.

4. See for instance J. Estarellas and T. F. Regan, A Report on a Research Project to Study the Effects of Teaching Sounds and Letters Simultaneously at the Very Beginning of a Basic Foreign Language Course., Department of Languages and Linguistics, Florida Atlantic University, Boca Raton, Fla., September, 1965 to January, 1966.

5. See R. J. Reid, "An Exploratory Survey of Foreign Language Teaching by Television in the United States," Reports of Surveys and Studies in the Teaching of Modern Foreign Languages, (New York: Modern Language Association, 1961) 197-211

6. (Washington: Department of Audiovisual Instruction, N.E.A. Monograph N.2, 1964), 67

7. System Development Corporation, Santa Monica, California, 9 November, 1962.

8. AV Communication Review, Spring 1966, 14, I, 71-89

9. See for instance E. Hocking, op. cit., 53-54.

10. See J. Estarellas and T. F. Regan, "Tomorrows' Language Lab Today," The Florida F.L. Reporter, Winter 1965-1966, 4, 2, 3-4.

11. For this purpose we are using From Sound to Letter by J. Estarellas, published by Instructional Materials Division, Continuous Progress Education, Inc., Wilton, Conn., 1965.

12. See T. F. Regan, "Prospects for Computer Usage in Programming Self-Evaluation of Foreign Language Speech Production". Proceedings of Fourth Annual Southeastern Regional Meeting of Association for Computing Machinery, Palm Beach, Fla., 1965. 339-347.

13. J. Estarellas, "Some Concepts of Modern Communication Theory As They Apply to Programming an F.L. Course", Paper read at the Second N.S.P.I. Convention, San Antonio, Texas, April 3, 1964; also, "Applications of Psycholinguistic Theory to Foreign Language Teaching", Paper read at the Second Southern Conference on Language Teaching, Atlanta, Georgia, February 4, 1966.